



Summer 1997

Installation Restoration Program

Naval Weapons Station Yorktown Yorktown, Virginia

Sites 9 and 19 Proposed Remedial Action

Summary

This fact sheet provides an overview of the Department of the Navy's proposed remediation for Site 9, the Plant 1 Explosives - Contaminated Wastewater Discharge Area, and for Site 19, the Conveyor Belt Soil at Building 10. Both of these sites are located at Naval Weapons Station (WPNSTA) Yorktown. Site 9 does not pose any immediate threat to human health. Although contaminants in the drainage area at Site 9 may affect aquatic and terrestrial receptors, removing the contaminants would pose a greater risk because habitats would be destroyed. Soil at Site 19 is contaminated with explosives, (primarily TNT) at levels that pose a risk to the commercial worker. For this reason, the Navy is proposing to excavate this soil and use biotreatment to destroy the explosive compounds. This public meeting is being held to give the public an opportunity to ask questions and discuss any concerns about the remediation.

Environmental Studies Sites 9 and 19 are two of several sites at WPNSTA Yorktown that are being investigated to determine whether past practices have resulted in environmental contamination. The investigations are being conducted through the Navy's Installation Restoration Program. The goal of this program is to study areas resulting from past, formerly accepted waste disposal practices at Navy Installations and clean them up if necessary. The study stages of the Installation Restoration Program process are described on page 4.

Site 9 consists of a drainage ditch that carried explosives-contaminated wastewater from Plant 1 (Building 10) into Lee Pond. The Site 9 study area is bordered by Bollman Road to the west, an abandoned railroad track to the north, Building 10 to the east, and Site 19 to the south.

Site 19 consists of a conveyor belt system that was used in the past to transport packaged TNT powder from Building 98 to Building 10. The conveyor system is located within an earthen trench. Aluminum was added to explosives formulations from Building 527 located along the conveyor belt. A soil removal was conducted along the conveyor belt by WPNSTA Yorktown personnel in 1973-1974. Specifics of the removal action at Site 19 are not known.

Removal Action

The Navy conducted a removal action at Site 9 in the fall of 1994 to remove surface debris that could be a potential source of contamination. Two types of waste, inert depth charges and railroad ties, were removed from the end of the drainage area adjacent to Bollman Road. Once the surface waste was removed, a magnetometer survey was conducted to locate any buried metallic waste. Buried waste was then removed. When all the waste was removed, samples were collected to determine that the area was clean. The area was backfilled, covered with topsoil, and revegetated.

Remedial Investigation

A site study, called a Remedial Investigation, has been conducted at Sites 9 and 19. The study was conducted in two phases: Round One (1992) and Round Two (1994). The Round One Remedial Investigation was conducted before the Removal Action took place. The results of the Round One Remedial Investigation indicated that further investigations were needed to better understand the nature and extent of contamination at the site.

The Round Two Remedial Investigation included collecting and analyzing surface soil, subsurface soil, groundwater, surface water, sediment, and biological samples to supplement the Round One Remedial Investigation samples and the Removal Action confirmation sampling. Based on the results of these samples, Human Health and Ecological Risk Assessments were conducted. The studies were conducted in accordance with the Federal Facilities Agreement between the Navy, the United States Environmental Protection Agency (USEPA) Region III, and the Virginia Department of Environmental Quality (VDEQ). This agreement sets procedures and schedules for conducting environmental studies.

The results of the Round Two Remedial Investigation include the following:

At Site 9, explosive constituents, semivolatile organic compounds, and inorganics were detected in the surface and subsurface soil. Explosive constituents and inorganic compounds were detected in groundwater. The areas of highest explosives contamination in surface soil, subsurface soil, and sediment were later cleaned up during the removal action. Site 9 does not pose a risk to human health; inorganic contamination at Site 9 may pose a potential risk to some land-dwelling animals.

At Site 19, explosive constituents and inorganics were detected in surface soil, subsurface soil, and groundwater. Semivolatile organic compounds were also detected in surface soil. Explosive constituents and aluminum, iron, and lead all contributed to human health risks and posed a potential risk to land-dwelling animals.

Feasibility Study

A Feasibility Study typically follows the Remedial Investigation in the Installation Restoration Program process. The results of the Remedial Investigation are evaluated to propose various cleanup methods and technologies to destroy contaminants. These methods and technologies are then outlined and costed in the Feasibility Study.

Proposed Alternative

Based upon an evaluation of the various alternatives, the Navy, in conjunction with the USEPA and the VADEQ, recommend Remedial Action Alternative 4 - Excavation/Biological Treatment as the preliminary choice for the remediation of Site 19 soil. No action is proposed for the Site 9 drainage area. These alternatives protect human health and the environment; comply with all applicable regulations and requirements; are highly effective and permanent; and, in the case of Site 19, reduce the toxicity, mobility, and volume of wastes to be disposed of through removal, treatment, and reuse. Bench-scale and pilot-scale treatability studies conducted for explosives-contaminated soil have shown that this technology is easy to implement and is significantly more cost effective than other "treatment" technologies. Alternative 4 provides maximum, short-term and long-term protection of human health and the environment with the least expenditure of funds.

Site and Biotreatment Cell Photos



Site 19- Conveyor Belt Soil at Building 10



Site 9- Plant 1 Explosives-contaminated Wastewater Discharge Area



Explosives-contaminated soil from Site 19 will be treated in this Biotreatment Cell at Site 22.

Public Participation	The public is encouraged to participate in the decision-making process. The following participation options are available:					
Information Repositories	The Proposed Plan is available for review along with other site documents in the information repository at the libraries listed below.					
Administrative Record File	The Administrative Record File is a compilation of the information evaluated to develop the Proposed Plan. The file is located at the libraries listed below.					
Public Meeting	The Public Meeting to solicit community input to the Proposed Plan, will be held on July 21, 1997 at the York County Social Services/Recreation Center Meeting Room, 301 Goodwin Neck Road, Yorktown, VA. The Open House begins at 6:30 p.m. followed by a formal presentation of the proposed remedy at 7:00 p.m. At this meeting, the Navy, in coordination with the USEPA and the VDEQ, will discuss the results of the investigation and risk assessments and the alternative described in the Proposed Plan. Upon completion of the presentation, representatives from the Navy, its consultants, the USEPA, and the VDEQ will be available to respond to questions at that time. Transcripts of the meeting will be included in the information repositories.					
Restoration Advisory Board	The Restoration Advisory Board meets to review the documents and provide review and comments. This board is comprised of federal, commonwealth, and local regulatory officials, WPNSTA Yorktown personnel, and community members. The Restoration Advisory Board is invited to attend the Public Meeting on July 21, 1997.					
Public Comment Period	<p>The Federal Facilities Public Comment Period will be held from June 30, 1997 to August 13, 1997. The public is encouraged to forward in writing opinions and comments to the Navy's Project Manager, Mr. Richard N. Stryker, or to WPNSTA Yorktown's point of contact, Mr. Jeffrey C. Harlow, or to the Public Affairs Officer, at the address listed on page 4. Verbal comments received at the public meeting and written comments received during the public comment period will be considered in selecting the remedial alternative. The public comments will be reviewed and presented in the Responsiveness Summary portion of the Record of Decision, which describes the final decision for remedial action.</p> <p>The public is encouraged to review and comment on the Proposed Plan and other documents pertaining to Sites 9 and 19. The Proposed Plan and other information/ reports pertaining to these sites are available at the information repositories at the following locations:</p> <table><tr><td>Newport News City Public Library Grissom Branch (757) 886-7896 366 DeShazor Drive Newport News, VA 23602</td><td>York County Public Library (757) 890-3377 8500 George Washington Hwy. Yorktown, Virginia 23692</td></tr><tr><td>Gloucester Public Library (804) 693-2998 P.O. Box 367 6382 Main Street Gloucester, VA 23061</td><td>Naval Weapons Station Yorktown Environmental Directorate (Code 09E17) (757) 887-4775 (ext. 29) (Contact: Mr. Jeffrey C. Harlow) Building 31-B, P.O. Drawer 160 Yorktown, VA 23691-0160</td></tr></table>		Newport News City Public Library Grissom Branch (757) 886-7896 366 DeShazor Drive Newport News, VA 23602	York County Public Library (757) 890-3377 8500 George Washington Hwy. Yorktown, Virginia 23692	Gloucester Public Library (804) 693-2998 P.O. Box 367 6382 Main Street Gloucester, VA 23061	Naval Weapons Station Yorktown Environmental Directorate (Code 09E17) (757) 887-4775 (ext. 29) (Contact: Mr. Jeffrey C. Harlow) Building 31-B, P.O. Drawer 160 Yorktown, VA 23691-0160
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Point of Contact

Interested persons may provide oral or written comments on the Proposed Plan from June 30, 1997 to August 13, 1997 to Mr. Jeffrey C. Harlow or the following addresses:

Public Affairs Officer
Naval Weapons Station Yorktown (Code P)
P.O. Drawer 160
Yorktown, Virginia 23691-0160
(804) 887-4444

Mr. Richard N. Stryker (Code 18222)
Commander, Atlantic Division
Naval Facilities Engineering Command
1510 Gilbert St. (Bldg. N-26)
Norfolk, Virginia 23511-2699
(757) 322-4778

IR Program Process

- ❖ **Preliminary Assessment/Site Inspection (PA/SI) or Site Screening Process (SSP):**
identifies potential threats to human health and the environment
- ❖ **Remedial Investigation (RI):**
analyzes contaminants and evaluates potential contamination migration from site and risks to human health and the environment
- ❖ **Feasibility Study (FS):**
evaluates feasible cleanup methods to meet environmental standards for human health and the environment
- ❖ **Proposed Remedial Action Plan (PRAP):**
outlines feasible alternatives and recommends remediation or cleanup method, if necessary
- ❖ **Public Comment Period/Meeting:**
allows for public examination of the PRAP and expression of comments; public meeting held to present proposed plan and answer questions
- ❖ **Record of Decision (ROD):**
specifies the cleanup method after evaluating public comments
- ❖ **Remedial Design (RD):**
involves preparation of construction specifications and other design plans for remediation
- ❖ **Remedial Action (RA):**
remediates or cleans up the site to approved environmental standards